BQA NCQF QUALIFICATION TEMPLATE

SECTION A:	QUALIFICATION DETAILS		
QUALIFICATION DEVELOPER (S)	*University of Botswana*		
TITLE	*Master of Philosophy in Industrial Design*	**NCQF LEVEL**	7
STRANDS (where applicable)	N/A		
FIELD	Culture, Arts and Crafts	**CREDIT VALUE**	240
SUB FIELD	*Design Studies*		

New Qualification		Legacy Qualification	✓	Renewal Qualification	
				Registration Code	

SUB-FRAMEWORK	General Education		TVET		Higher Education	✓									
QUALIFICATION TYPE	Certificate	I		II		III		IV		V		Diploma		Bachelor	
	Bachelor Honours		Post Graduate Certificate		Post Graduate Diploma										
	Masters	✓	Doctorate/ PhD												

RATIONALE AND PURPOSE OF THE QUALIFICATION

RATIONALE:

The qualification has been designed to respond to Botswana's social and economic needs and that of the region, especially in areas of design and technology. It is aligned to the key strategic sectors of manufacturing, creative industries, research, innovation, science, and technology as identified by the Human Resource Development Council, which requires a high workforce demand to transform Botswana into a knowledge-based and circular economy. The qualification's core mandate is to

produce researchers in Industrial Design. The qualification is in congruence with the Faculty of Engineering and Technology's vision of being the leading centre of excellence in engineering and the built environment in the world. The qualification contributes towards the strategic role of meeting the country's development needs through advancing human resource development and developing research and innovation capacity (Towards a Knowledge Society. Tertiary Education Policy, 2010; Revised National Policy of Education 1994; National Human Resource Development Plan, 2009-2022; Education and Training Sector Strategic Plan, 2015; and HRDC, Priority Skills 2023-2024, Botswana Science, Technology, and Innovation Foresight, 2023). Furthermore, this qualification is commensurate with three pillars of Vision 2036 of producing 'sustainable economic development, human and social development, and sustainable environment' and key future imperatives of research, innovation, and sustainability. Please note that the above-cited documents allude to the promotion of innovation in Botswana, which is primarily driven by industrial design.

PURPOSE: (itemise exit level outcomes)

1. Apply advanced theories, concepts, and methodologies for conducting high-impact research that contributes to the development of new knowledge and practical solutions for real-world problems in industrial design.
2. Develop a high level of professional competencies in industrial design through research projects to enhance learners' critical thinking and problem-solving and prepare them for careers in academia, industry, or other sectors.
3. Develop and advance a high level of mastery in innovation and creativity among learners, allowing for opportunities to engage in international collaboration, networking and fostering connections with scholars, practitioners, and industry professionals from around the world.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

The standard requirements for entrance to the Master of Philosophy in Industrial Design qualification shall be:

• Bachelor’s degree, NCQF Level 7 in related qualification.

• Recognition of prior learning and credit accumulation and transfer shall be considered.

SECTION B	QUALIFICATION SPECIFICATION
GRADUATE PROFILE (LEARNING OUTCOMES)	**ASSESSMENT CRITERIA**
1. Demonstrate a high level of proficiency in conducting independent, original research in industrial design, including formulating research questions, designing research methodologies, collecting, and analysing data, and interpreting findings within the context of existing literature and theoretical frameworks.	1.1 The research questions are focused, reflect originality and innovation, showing a departure from existing research and offering new insights or perspectives to contribute to knowledge. 1.2 The research methodologies are appropriate for addressing the research questions and objectives and demonstrating a deep understanding of the strengths, limitations, and applicability to the research context. 1.3 The data collection process and data analysis techniques are systematic and well-executed, ensuring the reliability and validity of the data collected allowing for meaningful interpretation and insight generation. 1.4 The findings are interpreted within the context of existing literature and theoretical frameworks, demonstrating an understanding of relevant concepts, debates, and trends in industrial design. 1.5 The research makes an original contribution to the field of industrial design, offering new knowledge, perspectives, or methodologies that extend existing scholarship.
2. Exhibit advanced critical thinking skills, systematically evaluating and synthesising diverse sources of information, perspectives, and methodologies to generate novel insights and contributions to the field of industrial design.	2.1 Demonstrates a thorough and comprehensive analysis of relevant literature, theories, and methodologies in industrial design, exploring multiple perspectives and approaches to the research topic. 2.2 Synthesises diverse sources of information, perspectives, and methodologies to develop a coherent and nuanced

	understanding of the research topic or problem. 2.3 Identifies gaps, contradictions, or unresolved questions in existing literature and research, highlighting opportunities for further inquiry or innovation in industrial design. 2.4 Critically evaluates the strengths and limitations of different research methodologies and approaches in industrial design, considering factors such as validity, reliability, scalability, and ethical considerations. 2.5 Generates novel insights and contributions to the field of industrial design through critical reflection, analysis, and synthesis of existing knowledge and research. 2.6 Applies creative and innovative thinking to address complex design challenges, proposing unconventional solutions or approaches that push the boundaries of traditional design practice.
3. Develop specialised expertise in a particular area of industrial design through research, thus, gaining in-depth knowledge and understanding of relevant theories, concepts, and practices, and demonstrating the ability to apply this expertise to address complex design challenges.	3.1 Demonstrates a comprehensive understanding of the chosen area of specialisation within industrial design, including relevant theories, concepts, historical context, and current trends. 3.2 Critically evaluates theoretical perspectives, identifying their strengths, limitations, and applicability to real-world design contexts. 3.3 Develops and implements design solutions that reflect a deep understanding of user needs, technological constraints, market dynamics, and socio-cultural considerations. 3.4 Produces high-quality research outputs, such as scholarly publications, conference presentations, design prototypes, or innovative products/services, that contribute to the advancement of the field. 3.5 Evaluates the effectiveness, efficiency, and sustainability of design solutions,

	considering criteria such as usability, functionality, aesthetics, and environmental impact. 3.6 Integrates insights from multiple disciplines or domains relevant to the area of specialisation to develop holistic and integrated design solutions.
4. Communicate research findings, methodologies, and theoretical frameworks to academic and professional audiences through scholarly publications, presentations, exhibitions, and other forms of dissemination, adhering to disciplinary conventions and standards of academic rigour.	4.1 Communicates research findings and methodologies clearly and concisely, using a language that is accessible to the target audience. 4.2 Articulates the relevance and significance of research findings to the academic discipline and/or professional field, highlighting their contributions to knowledge, theory, practice, or policy. 4.3 Adheres to disciplinary conventions and standards of academic rigour in scholarly communication, including citation practices, referencing formats, and attribution of sources. 4.4 Adapts communication strategies for different dissemination formats and platforms, including written publications, oral presentations, poster sessions, exhibitions, or digital media.
5. Integrate ethical considerations, sustainability principles, and social responsibility into research practice and design outcomes, demonstrating a commitment to promoting ethical and sustainable design solutions that benefit individuals, communities, and the environment.	5.1 Demonstrates a comprehensive understanding of ethical principles, values, and frameworks relevant to research practice and design in industrial contexts. 5.2 Applies sustainability principles to design practice, incorporating strategies to minimise environmental impact, reduce carbon footprint, and promote long-term ecological resilience. 5.3 Engages with stakeholders from diverse backgrounds, including marginalised or vulnerable communities, to ensure inclusivity, equity, and cultural sensitivity in design outcomes.

	5.4 Applies ethical decision-making frameworks and guidelines to navigate complex ethical dilemmas and trade-offs in research practice and design processes. 5.5 Embraces a holistic approach to sustainability, considering the interconnectedness of environmental, social, and economic factors in design decision-making. 5.6 Empowers communities to take ownership of design solutions, building capacity, resilience, and social capital for sustainable development and positive change. 5.7 Demonstrates leadership by advocating for ethical and sustainable design practices within the industrial design profession and broader society, raising awareness of ethical issues, sustainability challenges, and responsible design solutions.
6. Make a significant contribution to the advancement of knowledge in the field of industrial design through research, producing high-quality scholarly outputs that expand the theoretical, empirical, or methodological boundaries of the discipline and have the potential to inform practice, policy, and future research directions.	6.1 Demonstrates a clear and compelling rationale for the research, articulating its significance and relevance to the field of industrial design. 6.2 Demonstrates creativity, imagination, and intellectual curiosity in exploring uncharted territories or pushing the boundaries of current knowledge. 6.3 Adopts rigorous research methodologies and techniques, ensuring the validity, reliability, and replicability of research findings. 6.4 Advances theoretical understanding by developing new conceptual frameworks, models, or paradigms that offer deeper insights into the nature, processes, or dynamics of industrial design. 6.5 Demonstrates the potential for research findings to inform practice, policy, or future research directions in industrial design, offering practical solutions, recommendations, or implications.

	6.6 Disseminates research findings through high-quality scholarly outputs, such as peer-reviewed publications, conference presentations, exhibitions, or digital media platforms.

SECTION C	QUALIFICATION STRUCTURE				
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level [8]	Level [9]	Level [10]	
FUNDAMENTAL COMPONENT Subjects/ Courses/ Modules/Units	Research methods		**30**		**30**
CORE COMPONENT Subjects/Courses/ Modules/Units	Research proposal		60		**60**
	Journal Articles		30		**30**
	Thesis		120		**120**

STRANDS/ SPECIALIZATION	Subjects/ Courses/ Modules/Units	**Credits Per Relevant NCQF Level**			**Total Credits**
		Level [ ]	**Level [ ]**	**Level [ ]**	
1.					
	N/A				
2.					
Electives					

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	**Credit Value**
9	**240**
TOTAL CREDITS	**240**

Rules of Combination:

(Please Indicate combinations for the different constituent components of the qualification)

A candidate will obtain the qualification by:

(i) Completing the fundamental coursework (research methods module - 30 credits) and Core coursework (research proposal - 60 credits, and a thesis - 120 credits).

(ii) Publishing at least one (1) journal article in reputable journals recognised by the university (30 credits)

Total credits: 240

ASSESSMENT ARRANGEMENTS

All assessments, formative and summative, leading/contributing to the award of credits or qualifications should be based on learning outcomes and/or sub-outcomes.

Formative assessment

Formative assessment (research proposal) will contribute 50% towards the award of the final standing.

Summative assessment

Summative assessment will contribute 50% to the final standing.

MODERATION ARRANGEMENTS

The qualification shall have an internal and external moderator following applicable policies and regulations for quality assurance to ensure fairness, validity, reliability, and consistency of assessments. The moderators shall be registered and accredited by the Botswana Qualifications Authority and/or equivalent accreditation board.

RECOGNITION OF PRIOR LEARNING

Learners may submit evidence of prior learning and current competence and/or undergo appropriate forms of RPL assessment for the award of credits towards the qualification in accordance with applicable RPL policy, credit accumulation and transfer system and relevant national-level policy and legislative framework.

CREDIT ACCUMULATION AND TRANSFER

The Credit Accumulation and Transfer System shall be used for credit transfer between institutions of higher learning following the available Credit Accumulation and Transfer Policy of the University of Botswana which will be aligned to the National Credit Accumulation Transfer Policy.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Horizontal Articulation (related qualifications of a similar level (NCQF Level 10) that graduates may progress to):

- MPhil in Research
- MPhil in Design

- MPhil in Design (Products)
- MPhil in Product Design
- MPhil in Global Innovation Design
- MPhil in Innovation Design
- MPhil in Experience Design

Vertical Articulation (NCQF Level 10) qualifications to which the holder may progress to:

- PhD in Product Design
- PhD in Design
- PhD in Art & Design
- PhD in Innovation Design
- PhD in Design Management & Innovation
- PhD in Experience Design

Employment

- Researchers
- Industrial designers
- Consultants
- Design policymakers
- Product director
- Design entrepreneur
- Design innovator

QUALIFICATION AWARD AND CERTIFICATION

Minimum standards of achievement for the award of the qualification

To be awarded a Master of Philosophy in Industrial Design, a candidate should have satisfied all exit learning outcomes and met the minimum credit requirements (240 credits), fundamental and core components as indicated in the qualification structure.

Certification

For a candidate to be awarded a Master of Philosophy in Industrial Design qualification, he/she should have achieved a minimum of 240 credits. After satisfying all the requirements, a learner will be awarded a Master of Philosophy in Industrial Design certificate.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

A comparability of the current qualifications was conducted against qualifications at the University of New South Wales (Australia) (https://www.unsw.edu.au/arts-design-architecture/study-with-us/postgraduate-research/master-of-philosophy), De Montfort University (UK) (https://www.dmu.ac.uk/study/courses/postgraduate-courses/design-research-mphil-phd-degree/design-research-mphil-phd-degree.aspx), and Hong Kong University of Science & Technology (Hong Kong) (https://isd.hkust.edu.hk/academics/rpg).

The duration of the MPhil in Industrial Design qualification from the benchmarked qualifications ranges from 1-2 years full-time and 2-4 years part-time study. However, the credits for the benchmarked qualifications were not stated.

The entry requirements for an MPhil qualification are similar to the benchmarked qualifications, as one needs to possess a minimum of a master's degree in the relevant field.

The learning domains for MPhil qualifications are similar in knowledge, skills, and competencies, for example, developing and defending a research proposal, writing a dissertation and research publication.

The exit learning outcomes of this qualification compare well with those of the benchmarked qualifications, for example, contribution to knowledge, conducting independent and ethical research and research publication.

The modules are comparable as there is a taught module in the foundation year on research methodologies and other professional development activities such as conducting seminars. All qualifications require learners to conduct research and publications.

The assessment strategies in all the qualifications include submitting a research thesis, completing coursework, and defending the thesis. An MPhil is awarded to a learner who produces substantial research that contributes to knowledge in the field of study.

Employment pathways include researcher, industrial designer, consultant, design policymaker, product director, design entrepreneur and design innovator.

The Master of Philosophy in Industrial Design qualification aligns well with qualifications offered in the UK, Hong Kong, and Australia. Therefore, the qualification provides for the international mobility of graduates. Graduates can further study PhD's in Design, Product Design, and Design. It prepares graduates for research and teaching careers in higher education, government and research institutes, and industry, especially in research, development, and innovation.

REVIEW PERIOD

The qualification will be reviewed every five years.

For Official Use Only:

CODE (ID)			
REGISTRATION STATUS	**BQA DECISION NO.**	**REGISTRATION START DATE**	**REGISTRATION END DATE**
LAST DATE FOR ENROLMENT		**LAST DATE FOR ACHIEVEMENT**	